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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,060	08/21/2001	Timothy M. Swager	M00925/70094 TJO	7755

23628 7590 04/16/2003

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EXAMINER

TRUONG, DUC

ART UNIT	PAPER NUMBER
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1711

12

DATE MAILED: 04/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/935,060	SWAGER ET AL.	
	Examiner	Art Unit	
	Duc Truong	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 01 April 2003.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-63 is/are pending in the application.

4a) Of the above claim(s) 1-34 and 53-63 is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 35-52 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5&7</u> .	6) <input type="checkbox"/> Other: _____

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DETAILED ACTION

Applicant's election with traverse of Group III in Paper No. 11 is acknowledged.

The traversal is on the ground(s) that a single search and examination covering all claims would not place undue burden on Examiner. This is not found persuasive because the search is based on different classifications of Groups I, II, III and IV and constitute and undue burden in that the search for one of the inventions do not involve a search of the others and no error in the reasons for the requirements have been pointed out by Applicant.

The requirement is still deemed proper and is therefore made FINAL.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 35-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/57222 in view of Norvez or Yang et al of record on 1449.

WO 99/57222 discloses a class of luminescent and conductive polymer compositions having chromophores, a sensor and a method for sensing an analyte through the luminescent and conductive properties of these polymers (see Abstract and on page 1, lines 4 et seq.)

Note that said composition provides a polymeric composition of the structure (see page 15, lines 1-15) in that Ea component is shown attached to the backbone (see page 16), corresponding to the Fig. 1g of the application) in that G, H, I and J

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components have been disclosed on pages 17 et seq. including a host material could be considered inherent in the prior art.

The disclosure of the reference differs from the instant claims in that it does not disclose the claimed shape persistent molecule having at least 20% free volume nor the liquid crystalline property.

However, the reference does disclose the use of G, H, I and J components, as stated above, having a similar structures with this of the claims.

Norvez discloses a route to triptycenes substituted with one, two, five and six paraffinic chains and this molecule presents liquid crystalline property (see page 2414; Fig. 1, Schemes I-III).

Yang discloses the aromatic and three dimensional iptycene scaffolds have demonstrated particular utility in the formation of new organic materials, including chemical sensors, liquid crystals (see page 7911-7912; Figures 1 and 2) .

It would have been obvious to one of ordinary skill in the art to select the triptycenes or the iptycene, as disclosed in Norvez or Yang, to replace any G,H,I and J components, as disclosed in WO 99/57222, in order to gain the advantages of the combination of the references, that being of composition which has the added property of being liquid crystals.

WO 99/57222 discloses a class of luminescent and conductive polymer compositions having chromophores.

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Norvez or Yang provides evidence that the triptycene or iptycene having a similar structures with any G,H,I and J components, can be considered as shape persistent molecule components and can be used to form liquid crystals.

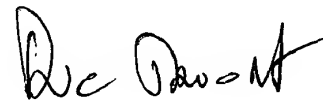
The replacement of said components of WO 99/57222 by the use of triptycene or iptycene, as disclosed in Norvez or Yang, to form the product having a liquid crystal property would not provide an unexpected results to one of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Truong whose telephone number is 703-308-2437. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703-308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9791 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

DT
April 14, 2003



DUCTRUONG
PRIMARY EXAMINER